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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/783,833	02/20/2004	Wade D. Vinson	200401256-1	7486

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HEWLETT-PACKARD COMPANY
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EXAMINER	
CHERVINSKY, BORIS LEO	
ART UNIT	PAPER NUMBER
2835	

DATE MAILED: 04/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/783,833

Applicant(s)

VINSON ET AL.

Examiner

Boris L. Chervinsky

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. Claims 1-3, 5, 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Edwards et al.

Edwards discloses a system that includes an electronic device 30, 36, a heat sink 50 coupled to a plurality of components 30 of different height disposed on a circuit board 36, a compliant material; 12 flexibly engaging the heat sink 50 and the plurality of components 30. Edwards discloses the claimed invention except the device is the computer device. It would be obvious to use the device as disclosed by Edwards et al. for a computer device since it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

Edwards discloses the claimed invention except fasteners compressing the compliant material between the heat sink and components, does not specify the thermal resistance to be less than 10 degrees Celsius-square centimeter per Watt, the device to be installed in a rack and comprises a computer server. The fasteners are disclosed in the prior art listed in the US PTO 892 Form, which are not applied at this time, therefore is obvious; the thermal resistance of the thermal interface is to be a property of used material and it would have been obvious to one having ordinary skill in the art at the time the invention was made to specify the material with minimal thermal resistance from available materials for the thermal interface, since it has been held to be within the

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general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416; and to mount the claimed device in the rack and/or in the computer server is obvious as the intended use for reason indicated above.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 13,18-21, 23-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Edwards et al.

See rejection of claim 1 above. The method steps of claim 21 are necessitated by the device structure as disclosed by Edwards et al.

Claim Rejections - 35 USC § 103

4. Claims 4, 6, 14, 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Edwards et al. in view of Webb.

Edwards discloses the claimed invention except a stiffening rib and mounting fasteners in triangular configuration.

Webb discloses the heat sink having the stiffening rib and three mounting fasteners arranged in the triangular configuration. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the fastening

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configuration as disclosed by Webb for the device disclosed by Edwards for attaching the heat sink to a substrate.

5. Claims 8, 9, 11, 12, 16, 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Edwards et al. in view of Farnsworth et al.

Edwards et al. disclose the claimed invention except tool-free mounting mechanism mounting the heat sink to the device. Farnsworth discloses tool-free attachment of the heat sink to the device. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the tool-free attachment as disclosed by Farnsworth for the device disclosed by Edwards et al. for easy heat sink replacement. The rejection of claims 1, 5, and 7 above can be applied to reject claims 9, 11 and 12 in view of claim 8.

6. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Edwards et al. in view of Farnsworth et al and further in view of Birger.

Edwards discloses the claimed invention except interface material comprising a pad having an adhesive surface. Birger discloses the interface pad having adhesive surface. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the pad as disclosed by Birger in the device disclosed by Edwards for the sufficient thermal conduction and easy assembly of all structural elements.

7. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Edwards et al.

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Edwards discloses the claimed invention except for less than 2 mm. thickness of the flexible material. It would have been an obvious matter of design choice to use 2mm or less flexible material, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Boris L. Chervinsky whose telephone number is 571-272-2039. The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn D. Feild can be reached on 571-272-2800 ext. 35. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BORIS CHERVINSKY
PRIMARY EXAMINER



4/19/5